

**REMARKS**

Claims 1-33 are pending in the subject application, with claims 1 and 26 in independent form.

Independent claims 1 and 26 and dependent claims 3, 15, and 19 through 23 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Higashihara (U.S. Pat. No. 5,653,630). Dependent claims 2, 4 through 6, 7, 16 through 18, 26 through 29, and 31 through 33, stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of various references. Specifically, dependent claims 2 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of Schaal et al. (U.S. Pat. No. 6,482,884). Dependent claims 4-6 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of knowledge of one of ordinary skill in the art. Dependent claims 7, 18, 29, and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of Carroll, Jr. (U.S. Pat. No. 5,192,609). Dependent claims 16, 17, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of Inoue et al. (U.S. Pat. No. 5,326,315). The Applicant respectfully traverses each of the 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) rejections.

**Claim Rejections - 35 U.S.C. §102(b)**

As the Examiner is aware, to establish a proper 35 U.S.C. §102(b) rejection, the reference must teach *every* aspect of the claimed invention either explicitly or impliedly. See MPEP §706.

As originally described in paragraph [0008] of the present patent application, the Applicant was already fully aware of European Patent 0 705 725 A1 to Higashihara which is in the same patent family as the '630 patent to Higashihara cited by the Examiner and which has an identical disclosure to the '630 patent. As such, the Applicant had already prepared the claims to

distinguish over the '630 patent and any other patents or publications in the same patent family. Specifically, independent claims 1 and 26 are patentably distinguishable over Higashihara and provide a unique heating, ventilation, and air conditioning (HVAC) system (claim 1) and a film valve assembly for an HVAC system (claim 26) which focus on, among other elements, a film comprising a substrate comprising a fiber selected from the group of polyester-based fibers, glass-based fibers, and combinations thereof (emphasis added).

In contrast, Higashihara, in Figure 5 and in col. 6, lines 26-39, discloses a "mode switching door 20...constructed as a multi-layer film including a basic layer 201 as a PPS film (which the Examiner equates to an elastomeric layer)...intermediate layers 203 as nylon woven fabric (which the Examiner equates to a substrate)...and layers 204 of a silicon coating material." In every instance when the basic layer 201 is described by Higashihara, the basic layer 201 is polyphenylene sulfide (PPS), a thermoplastic rigid material. Higashihara does not disclose utilizing elastomers or any other components in its basic layer 201. As is known by those skilled in the art, thermoplastics are not equivalent to elastomers, because elastomers are typically not rigid and have the elastic properties of rubber. As such, thermoplastics cannot be used to form "elastomeric layers." Accordingly, a proper 35 U.S.C. §102(b) rejection is not established as disclosure of PPS does not anticipate a claim requiring an elastomeric layer.

Also, in every instance when the intermediate layers 203 are described by Higashihara, the intermediate layers 203 are nylon. Higashihara does not disclose polyester-based fibers or glass-based fibers and does not disclose utilizing any other components in its intermediate layers 203. As is well known in the art, nylon is a polyamide resin, which is chemically unique and is not equivalent to a polyester, to glass, or to combinations thereof, as required by both independent claims 1 and 26 of the instant patent application. Simply stated, Higashihara does

not disclose *every* aspect of the claimed invention either explicitly or impliedly. Accordingly, a proper 35 U.S.C. §102(b) rejection is not established as disclosure of nylon does not anticipate a claim requiring polyester based fibers or glass based fibers. As such, the Applicant respectfully submits that the §102(b) rejections of independent claims 1 and 26 and dependent claims 3, 15, and 19-23 are overcome and that these claims are allowable.

**Claim Rejections - 35 U.S.C. § 103(a)**

The Applicant respectfully traverses the 35 U.S.C. § 103(a) rejections. As established above, Higashihara does not disclose *every* aspect of the claimed invention either explicitly or impliedly, i.e., Higashihara does not disclose the elastomeric layer or the polyester based fibers or glass based fibers. Furthermore, as described below, even if Higashihara is combined with the other references relied on by the Examiner, every aspect of the claimed invention is not disclosed, taught, or suggested. Therefore, each of the rejections under 35 U.S.C. § 103(a) for the dependent claims are respectfully traversed.

As the Examiner is aware, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP § 2143.

The cases of *In re Sang Su Lee*<sup>1</sup> and *Princeton Biochemicals, Inc. v. Beckman Coulter, Inc.*<sup>2</sup> clarify the law and the Examiner's responsibilities relative to the first criterion. The more applicable and recent case, *Princeton*, is discussed immediately below. In June of 2005, the

<sup>1</sup> 277 F.3d 1338 (Fed. Cir. 2002).

<sup>2</sup> 411 F.3d 1332 (Fed. Cir. 2005).

Court of Appeals for the Federal Circuit (CAFC) reiterated the principles involved in assessing the differences between the prior art and the claimed invention when addressing the first criterion...in the instant patent application, the motivation to combine Higashihara and other references. See *Princeton*. In *Princeton*, citing *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004), the CAFC emphasized that a rejection under 35 U.S.C. § 103 specifically requires consideration of the claimed invention "as a whole." Relating to this "as a whole" issue, the CAFC went further to emphasize that...

[i]nventions typically are new combinations of existing principles or features. *Env'l. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983) (noting that "virtually all [inventions] are combinations of old elements"). The "as a whole" instruction in title 35 prevents evaluation of the invention part by part. *Ruiz*, 357 F.3d at 1275. Without this important requirement, an obviousness assessment might successfully break an invention into its component parts, then find a prior art reference corresponding to each components. *Id.* This line of reasoning would import hindsight into the obviousness determination by using the invention as a roadmap to find its prior art components. Further, this improper method would discount the value of combining various existing features or principles in a new way to achieve a new result – often the essence of the invention. *Id.*

The "as a whole" assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the invention and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner. *Id.* In other words, §103 requires some suggestion or motivation, before the invention itself, to make the new combination. (emphasis added).

Dependent Claims 2 and 27:

Dependent claims 2 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of Schaal et al. (U.S. Pat. No. 6,482,884). The Applicant respectfully traverses and asserts that the Examiner has not established the first and third criteria required for a *prima facie* case of obviousness. Specifically, Higashihara does not disclose *every* aspect of the claimed invention either explicitly or impliedly, i.e., Higashihara does not disclose the elastomeric layer or the polyester based fibers or glass based fibers. Schaal et al. does nothing to remedy the lack of disclosure of the polyester based fibers or the glass based fibers of Higashihara.

Relative to the first criterion, it is improper to combine Higashihara and Schaal et al. as neither reference presents any motivation to combine one with the other. The Examiner contends that Schaal et al. discloses "the presence of a silicone-containing composition comprising a vinyl and methoxy functional dimethyl siloxane" in col. 9, lines 36-37, and concludes that one skilled in the art would find it obvious to modify the system of Higashihara with Schaal et al. to include the silicone containing composition (i.e., to form the silicone topcoat layer of the present invention)...*for the purpose of durability*. Yet, the Examiner fails to recognize that the silicone topcoat layer of the present invention is used to "minimize noise created as the substrate of the film moves between the open and closed positions in the housing of the HVAC system," as stated in the independent claim 1 of the instant invention and as described in [0062] of the instant patent application, and is not used for increased durability. The silicone topcoat layer of the present invention, including the silicone-containing composition comprising a vinyl and methoxy functional dimethyl siloxane, has a minimum tackiness and reduces an amount of friction between the substrate of the film and anything in contact with the

substrate of the film. As such, it is certainly not obvious to combine the silicone-containing composition of Schaal et al. with Higashihara to form the silicone topcoat layer of the present invention to dampen noise and vibrations within an HVAC system.

The Examiner also fails to recognize the context in which Schaal et al. is written and utilized. This patent is assigned to Pirelli Pneumatici S.p.A., a tire manufacturer. As expected, in their field of the invention, Schaal et al. specifically references applicability to tires and mechanical goods, and cites advantages of improved processability, storage stability, and/or cure, of their silica reinforced rubber composition. Schaal et al. does not disclose noise reduction or reduction of friction as advantages of their composition. In fact, reduction of friction in tires would not only be a disadvantage, it would also be dangerous as a reduction of friction would likely make the tires unsafe for use.

Further, Schaal et al. does not expand on the description of mechanical goods and does not disclose any usage of the compositions in automotive applications other than tires. It would not be obvious one of ordinary skill in the art to apply technology developed for automobile tires to an HVAC system. As such, the Examiner does not present a valid suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Therefore, the Examiner has not satisfied the first criterion of obviousness and has not established a *prima facie* case of obviousness.

Relative to the third criterion, even if there is a suggestion or motivation to combine Higashihara and Schaal et al., these references, when combined, are insufficient to satisfy the third criterion. As already established, Higashihara does not disclose all of the limitations of the present invention. Likewise, Schaal et al., in Col. 9, lines 36-67, cited by the Examiner, does not

remedy the lack of disclosure of Higashihara and does not disclose a silicone-containing composition comprising a vinyl and a methoxy functional dimethyl siloxane. In fact, Schaal et al., in Col. 9, lines 36-67, does not disclose any compound including silicon atoms. In Col. 10, lines 27-29, Schaal et al. discloses poly(dimethyl siloxane) that is diglycidyl ether terminated and Poly(dimethyl siloxane)-co-[2,(3,4-epoxycyclohexyl)ethyl]methyl siloxane]. Yet, neither of these compounds includes vinyl or methoxy functionality. Therefore, Schaal et al. does not disclose the claim limitation as purported by the Examiner. Accordingly, it is respectfully submitted that the § 103(a) rejection of Dependent claims 2 and 27 is overcome and that these claims are allowable.

Dependent claims 4-6 and 28:

Dependent claims 4-6 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of knowledge of one of ordinary skill in the art, and the Applicant respectfully traverses. The Examiner incorrectly asserts that one of ordinary skill in the art would realize that silicone rubber could be utilized with the elastomeric layer of the present invention based on suitability. As stated above, in *Princeton*, the CAFC emphasized that a rejection under 35 U.S.C. § 103 specifically requires consideration of the claimed invention “as a whole.” The “as a whole” assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the invention and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the claimed manner. There is no evidence that would suggest modifying Higashihara to form the instant invention by using silicone rubber alone or silicone rubber including various components such as vinyl and methoxy functional dimethylsiloxanes or organic peroxide catalysts. In fact, the Applicant is confused as to any

possible motivation to modify Higashihara as Higashihara consistently discloses using a silicon coating material in the "Description of Preferred Embodiments" and changes focus in claim 6 disclosing use of a "coating made of silicone material." Therefore, even if there was motivation to modify Higashihara, one of skill in the art would be confused as to any uses of silicon versus silicone, as they are very different from each other and would not form the instant invention.

Those skilled in the art recognize that silicone is commonly referred to as "silicon" in error. Although silicones include silicon (Si) atoms, the silicones do not exclusively include the silicon (Si) atoms. As such, the silicones have completely different physical characteristics from compositions that are commonly referred to by those of skill in the art as silicon resins and it is inappropriate to directly relate one with the other.

Therefore, the Examiner cannot satisfy the first criterion of the *prima facie* case of obviousness as one of skill in the art would have no motivation to modify Higashihara. Also, as Higashihara does not teach or suggest use of polyester-based fibers and/or glass-based fibers, even if there was motivation to modify Higashihara, the Examiner cannot satisfy the third criterion, i.e., the prior art reference when modified must teach or suggest all the claim limitations. Accordingly, it is respectfully submitted that the § 103(a) rejection of Dependent claims 4-6, and 28 is overcome and that these claims are allowable.

Dependent claims 7, 18, 29 and 33:

Dependent claims 7, 18, 29, and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Higashihara in view of Carroll, Jr. (U.S. Pat. No. 5,192,609). Once again, the Applicant respectfully traverses. In this rejection, the Examiner has not established the first, second, and third criteria of the *prima facie* case of obviousness.

Relative to the first criterion, there is no motivation to combine Higashihara and Carroll, Jr. As described above, Higashihara does not disclose the elastomeric layer, the polyester based fibers, or glass based fibers, either explicitly or impliedly. In this rejection, the Examiner contends that Carroll, Jr. discloses "the presence of an elastomeric layer comprising urethane" in col. 9, lines 40-43 and concludes that one skilled in the art would find it obvious to modify the system of Higashihara with Carroll, Jr. Yet, the Examiner fails to recognize the context in which the elastomeric layer of Carroll, Jr. is used. Carroll, Jr. discloses using the elastomeric layer with a thermoformable sheet and a substrate. Through thermoforming the sheet to the substrate, the thermoformable sheet forms a protective and decorative surface over the substrate for use in automobile basecoat/clearcoat paint applications. One of skill in HVAC art would not look to automobile paint application art to find an element of the present invention. In fact, Carroll, Jr. does not disclose use of the thermoformable sheet for any internal components of an automobile such as an HVAC unit. As such, the Examiner has not established the first criterion of the *prima facie* case of obviousness as there is no motivation to combine Higashihara and Carroll, Jr.

Relative to the second criterion, even if there was motivation to combine Higashihara and Carroll, Jr., the thermoformable sheet would likely not be able to be used with success with Higashihara. If the thermoformable sheet were used with Higashihara, the heat within the HVAC system would likely alter the physical properties of the thermoformable sheet causing deformation and inefficiency. Therefore, the thermoformable sheet of Carroll, Jr. is not suitable for use as it would likely deform and would not effectively control airflow within the HVAC system. Accordingly, the Examiner has not satisfied the second criterion of obviousness and has not established a *prima facie* case of obviousness.

Relative to the third criterion, even if there is a suggestion or motivation to combine Higashihara and Carroll, Jr., these references are insufficient to establish the third criterion of the *prima facie* case of obviousness, i.e., a teaching or suggestion of all claim limitations. As set forth above, Higashihara does not disclose all of the limitations of the present invention. Carroll, Jr. does not disclose all of the claim limitations either. With reference to dependent claims 18 and 33, the Examiner contends that Carroll, Jr. discloses a substrate comprising a fiber wherein the fiber comprises at least one of woven, polyester-based fibers and non-woven, polyester-based fibers, in col. 11, lines 29-32. However, the Applicant is confused by the Examiner's reference to col. 11, lines 29-32, as these lines address a thin polyester film having a certain thickness without referencing woven and/or non-woven polyester-based fibers whatsoever. Accordingly, it is respectfully submitted that the § 103(a) rejection of Dependent claims 7, 18, 29, and 33 is overcome and that these claims are allowable.

Dependent claims 16, 17, 31 and 32:

Dependent claims 16, 17, 31, and 32 stand rejected under 35 U.S.C. § 103(a). These Dependent claims stand rejected as being unpatentable over Higashihara in view of Inoue et al. (U.S. Pat. No. 5,326,315). The Applicant respectfully traverses. In this rejection, the Examiner has failed to satisfy the third criterion of the *prima facie* case of obviousness. As originally described in paragraphs [00014] to [00018] of the present patent application, the Applicant was already fully aware of the patent to Inoue et al and had already prepared the claims to distinguish over Inoue et al.

As Higashihara does not disclose all of the limitations of the present invention, i.e., Higashihara does not disclose the elastomeric layer or the polyester based fibers or glass based fibers either explicitly or impliedly, the Examiner cites Inoue et al. to form the § 103(a) rejection.

In doing so, the Examiner correctly asserts that Inoue et al. discloses a cloth layer including woven and/or non-woven glass fibers used in an air passage changeover device. However, the Examiner fails to realize that Inoue et al. does not disclose, teach, or suggest all of the claim limitations, as Inoue et al. does not disclose a silicone topcoat layer disposed on an elastomeric layer. Rather, Inoue et al. discloses a silicon resin in col. 6 line 34 that is *impregnated* into the cloth layer (col. 6 lines 46-48). In fact, Inoue et al. consistently refers to a silicon layer and never discloses, teaches, or suggests, use of silicone. As described above, silicon compounds are very different from silicones. Therefore, it is improper to relate the silicone layer of Higashihara with the silicon composition of Inoue et al.

Also, as Inoue et al. states that the "screen of the present invention is composed in such a manner that the resin coat layer (i.e., the silicon resin) is impregnated into the cloth layer," in col. 6 lines 46-48, Inoue et al. is specifically stating that there is no separate layer of the silicon resin. Therefore, it would not be correct to conclude that the resin coat layer of Inoue et al. is a separate layer. However, even if Inoue et al. did suggest that there could be a separate layer of the silicon resin, the silicon resin is not "disposed on" the elastomeric layer as shown in Figures 2 through 8. Rather, the silicon resin is "disposed on" (i.e., *impregnated into*) the cloth layer in these Figures.

Therefore, even when combined, Higashihara and Inoue et al. do not allow the Examiner to meet the burden required to appropriately establish the third criterion. Accordingly, it is respectfully submitted that the § 103(a) rejection of Dependent claims 16, 17, 31, and 32 is overcome and that these claims are allowable.

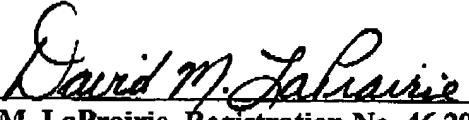
In view of the remarks set forth above, the Applicant's Attorney respectfully submits that the claims are in condition for allowance and respectfully requests such allowance. The

Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys, P.C., for any fees or credit the account for any overpayment.

Respectfully submitted,

**HOWARD & HOWARD ATTORNEYS, P.C.**

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